

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. What is Inheritance in Java? Explain with a simple example how a subclass inherits attributes and methods from a superclass in detail.
17. Describe the concept of Byte streams in Java and how they are used for reading and writing binary data.
18. Write a detailed step-by-step procedure to build a simple Swing application with an example program.
19. Discuss on how a Servlet processes make HTTP requests, handles different types of HTTP methods and sends responses back to the Client with an example.
20. What is JDBC? Write a Java program to store and retrieve the information from the employee database using JDBC connectivity and explain.

NOVEMBER/DECEMBER 2025

**23PCA31 — ADVANCED JAVA
PROGRAMMING**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. How do you declare and initialize a one-dimensional Array in Java? Provide an example.
2. What is a Class in Java, and how does it differ from an Object?
3. Which method would you use to convert a String to all Uppercase letters?
4. How does FileOutputStream differ from FileWriter in Java?
5. What is the purpose of the init() method in an Applet's lifecycle?
6. Name two core Swing packages used for GUI programming in Java.

7. Name two core Classes/Interfaces of JavaBeans API.
8. Mention two packages used in Java Servlets.
9. List two advantages of using RMI in Java.
10. Mention two key advantages of using JDBC for database connectivity in Java.

SECTION B — (5 × 5 = 25 marks)

Answer ALL the questions.

11. (a) Describe the use of “if” statement in Java with an example.

Or

- (b) What are the main principles of Object-Oriented Programming (OOP) in Java? Discuss.

12. (a) Describe the various special String operations provided by the String class in Java.

Or

- (b) Explain the concept of File handling in Java with an example.

13. (a) Explicate the life cycle of an Applet with an example.

Or

- (b) Discuss on how Swing components differ from AWT components and the advantages of Swing for GUT development.

14. (a) What is Introspection in Java Beans? Explain how introspection works and its role in the JavaBeans architecture.

Or

- (b) Explain the structure of a simple Servlet with an example.

15. (a) Discuss on the process of Socket programming in Java.

Or

- (b) What are the SQL commands used for creating and deleting tables? Explain.

